POLREP No. 17 and FINAL

I. Heading

Date: February 26, 2001
Subject: Hackberry Pits
From: OSC Robert M. Ryan, P.E., U. S. EPA Region 6
To: Director, ERD
Charles A. Gazda, Chief, RPB, Region 6

II. Background

Site ID#: Z6FR
FPN: N00023
Response Authority: OPA
NPL Status: Non-NPL
State Notification: LOSCO, LDNR
Incident Category: Active
Action Memorandum Status: N/A

CERCLIS No.: N/A
Delivery Order No.: N/A
ERNS No.: N/A
Action Lead: Fund
Start Date: October 2, 2000
Completion Date: February 22, 2001

III. Situation Information:

A. Incident Category: Abandoned Oil Production Facility

1. Site Location

Facility 12-E-1001, identified as the Hackberry Pit No. 1, is located in the East Hackberry Oil Field, within the Pete Seay Circle Road (Rd) residential area of Hackberry, Cameron Parish, Louisiana. The pit is located approximately 400 feet (ft.) south of Black Lake Bayou and 0.5 miles west of the Calcasieu Ship Channel. The facility is mapped in the Moss Lake USGS 7.5-minute quadrangle, within Section 37, Township 12 South, Range 10 East. The geographic center of Pit 1 is at Latitude 30° 00' 12" North and Longitude 93° 20' 27" West. The facility is accessible by land only. To reach the site, travel 700 ft. south on Highway 27 from Black Lake Bayou and turn left onto Pete Seay Circle Rd. Travel approximately 1,000-ft. on the north side of Pete Seay Circle Rd. and the pit will be located approximately 40-ft. to the south.

The facility is comprised of a well and seven pits, identified as Pit 1 through Pit 7, that range in size between 23,300 and 39 square ft. All are located within an area of approximately 2-acres. Pit 1, the largest of the seven pits, is the only pit that can be observed from the Pete Seay Circle Rd. Pit 1 has no available freeboard and is encompassed by a clay berm measuring 112 ft. by 208 ft. that is 2 ft. taller than the surrounding landscape. The Pit is approximately 4 ft. 6 inches (in.) in depth to the natural clay bottom. A 6 in. water layer exists on the surface, while the remainder is a heavy sludge. Pit 2 is located approximately 15 ft. south of Pit 1 and measures 11 ft. by 11 ft. The pit is a square recession in the ground that has been lined with boards to prevent cave-ins. Pit 2 is 2.5 ft. deep and is filled with 2 ft. of water. It is interconnected to both Pit 1 and Pit 4 via piping and valves. Approximately 10 ft. west of Pit 2

is Pit 3, which measures 11 ft. by 9 ft. and is also lined with boards. Pit 3 is 1.5 ft. deep and contains 1 ft. of water. Both Pit 2 and Pit 3 have approximately 6 in. of available freeboard. Pit 4 is located approximately 30 ft. south of Pit 3 and 60 ft. southwest of Pit 2 and measures 102 ft. by 21 ft. It is surrounded by a 1 ft. clay berm and has 2.5 ft. of available freeboard inside. Pit 4 is approximately 5 ft. deep from the top of the clay berm and contains 2.5 ft. of water. Pit 5 is adjacent to the east side of Pit 1 and shares a common clay berm. Pit 5 has 2.5 ft. of available freeboard and measures approximately 62 ft. by 194 ft. The Pit has approximately 1 ft. of water inside. East of Pit 5 is Pit 6. Both share a common clay berm for containment purposes. Pit 6 measures 87 ft. by 52 ft., is empty, and has a full 3 ft. of available freeboard to the top of the clay berm. Pit 7 is located approximately 10 ft. north of the northeast corner of Pit 1 and is interconnected to Pit 1 via pipe. It measures 6 ft. 3 in. square and is approximately 2.5 ft. deep, with 1.5 ft. of this depth containing water. Pit 7 is formed out of concrete and resembles a sump-like structure. The top of the concrete structure is approximately 1 foot taller than the surrounding landscape.

Approximately 20 to 25 wells are located within a 1,000-ft. radius of the facility, but only the Caldwell Well No. 8 (Serial No. 022320) has been linked to the facility by the Louisiana Department of Natural Resources (LDNR). According to records, the initial drilling and operation of this well were permitted to the Union Sulphur Company on March 31, 1939. The last known operator of the well was R-5, Incorporated, who acquired it on June 21, 1974. A summary of the status and type of well identified as associated with the facility is presented in the Well Status Table. Another well is located approximately 20 to 30 ft. south of Pit 5 and is connected to the pit via a pipeline. The well is rudimentarily plugged with a wooden block. LDNR has no known record of the initial drilling nor operation of this particular well.

Unit Petroleum, Incorporated currently operates tank batteries located both northwest and southeast of the pits that are not associated with this facility. The tank batteries appear to be out of service, and there are no indications of their association with the pits. Three active separators, also not believed to be associated with this facility, are located approximately 300-ft. to the east.

WELL STATUS TABLE
Hackberry Pit No. 1
Operator Code: 4912
April 1, 1999

LOSCO I.D. Number [1]	Serial Number	Well Name	Status (Based on LDNR Records)	Confirmation [2]
N/I	022320	CALDWELL WELL NO. 008	Orphan Wells (Oil)	CPO
N/I	UNKNOWN [3]	UNKNOWN [3]	UNKNOWN [3]	CPO

Note: [1] Refer to LDNR Records of Communication (ROC) and LOSCO field sheets for specific information on associated wells.
[2] Information in this column is based upon an interpretation of research data, LDNR records, and communication with field personnel by START for the purpose of justifying the association of the well to the facility.
[3] An unidentified well plugged with a wooden block located approximately 30 ft. south of Pit 5.

Key: CPO = Confirmed association via proximity to site and identical operators.
N/I = No information was available.

Source: Ecology and Environment, Inc., 1999.

CONTAINER STATUS TABLE
Hackberry Pit No. 1
12-E-1001
April 1, 1999

Container	Capacity (bbl)	Volume (bbl) [1]	Description of Contents	Radiation Monitoring/ Analytical Data [2]	Container Condition
Pit 1	20,700	18,280	Thin layer of water/heavy oil sludge underneath 4'-5" depth average	ND for radiation/ 46.17% oil & grease content [3]	Inadequate clay berm/ signs of prior breaching
Pit 2	54	43	Contains mostly water/ Sheen observed	ND for radiation/no analytical	Adequate condition/clay berm
Pit 3	26	17	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Pit 4	1,900	952	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Pit 5	8,020	1,480	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Pit 6	2,410	0	No contents/dry pit	ND for radiation/no analytical	Adequate condition/clay berm
Pit 7	98	74	Contains only water	ND for radiation/no analytical	Adequate condition/clay berm
Total Volume =	33,208	20,846	**Total Volume of all Petroleum-Based Materials [3] =18,280 bbl**		

Note: [1] Contents may include oil/water mixture or produced water.
[3] "Total Volume of all Petroleum-Based Materials" excludes any contents described as water or sheen on water. This volume calculation is for use in the Threat Ranking Matrix Table.
[3] Analytical procured by LDNR. Analysis completed by Laboratory & Analytical Business Services, Inc. on July 21, 1999.

Key: bbl = Barrels.
NA = Unable to gauge contents.
ND = Non-detected above background levels.

Source: Ecology and Environment, Inc., 1999.

2. Description of Threat

The facility is situated 400 ft. south of Black Lake Bayou and 0.5 miles west of the Calcasieu River Ship Channel. The pits are located within the city limits of Hackberry Louisiana, and are surrounded by approximately 50 residences within a 1-mile radius of the Hackberry Pit No. 1. Approximately 300 ft. to the north and directly across the Pete Seay Circle Road from Pit 1 are a local boat launch, a bait & tackle store, and a seafood processing plant.

THREAT STATUS TABLE
Hackberry Pit No. 1
12-E-1001
April 1, 1999

Criteria [1]	Evaluated Specifications	Possible	Points
Volume	0 Bbl.	0	
	1 Point per 23 bbl.	1-42	
	Greater than 1,000 bbl.	43	
Proximity to Waterways [2]			
	Points = [12 - (distance in ft/500 ft)] round to nearest whole number.	1-11	
	Over water.	12	
Container Condition			
	Rusty, pitted, corroded, or cracked.	5	
	Top open or holed--Potential overflow from precipitation.	15	
	Product within secondary containment.	20	
	Weeping seeping or holed.	25	
Potential for Dumping			
	Hatches/containers accessible, proximal to roads or transportation.	1-7	
	Containers open, pits, and proximal to roads or transportation.	8	
Accessibility to Wildlife and Persons			
	Limited security features, accessible to persons.	1-11	
	Open pits with oil.	12	
Priority based on points:	None 0-20 Medium 41-60 Low 21-40 High 61-100		High

Note: [1] Qualitative interpretation prepared by START based on five criteria deemed most significant in evaluating a potential threat.
[2] For the purpose of threat evaluation, a waterway is defined as any perennial water body.
Key: bbl = Barrels.
Ft = Feet (US).
Source: Ecology and Environment, Inc., 1999.

The facility is considered a high threat due to the large volume of petroleum related product located within Pit 1. Since the underflow pipes are inoperable and the release of hydrocarbon pockets are continuing, an oil overflow from Pit 1 is occurring. A high number of residences are in close proximity to the pits and the pits pose both a chemical and physical hazard to children in this neighborhood. The local residents have expressed their concern in signed petitions and letters written to LDNR.

B. Response Information

1. Current Situation

The USACE contractor, IT Corporation, has discontinued activities at the Hackberry Pits site.

2. Removal Activities to Date:

START, USACE, and IT demobilized from the site on November 22, 2000 for the Thanksgiving Holiday. Site activities will commence on November 28, 2000.

During the week of December 16, 2000, IT pumped approximately 15,200 gallons of water from Pit 1 and processes it through the water treatment system where it discharged into Black Lake Bayou. Approximately 134,190 gallons (36 trucks) of oily sludge was removed from Pit 1, and transported to US Liquids for fuel blending. Due to inclement weather conditions (rain) on 12/13/00, the site was closed early. On 12/14/00 the carbon from the filtration system was replaced, and the spent carbon was discharged into Pit 1. On 12/15/00 sludge storage box was emptied, and materials disposed of. IT has requested for a confined space entry permit so the box can be decontaminated and removed off site. Approximately 1.3 inches of rain fell at the site throughout the week, which added approximately 16,000 gallons of water to Pit 1. To date approximately 111,800 gallons of water has been treated at discharged to Black Lake Bayou, approximately 96,000 gallons of water has been disposed of at US Liquids, and approximately 296,730 gallons of oily sludge has been removed and transported to US Liquids for fuel blending.

During the week of December 21, 2000, IT removed 189,210 gallons (53 trucks) of oily sludge. On 12/18/00, a stick in Pit #1 damaged the sludge sump pump. The IT crew repaired the sump pump. On, 12/18/00, the dry prime pump would not draw a vacuum to pump the water to be treated. Chris Moreau of IT had the pump replaced. On 12/19/00 a bulldozer was delivered to the site. The bulldozer was used to crowd in the Pit #1. Pit #1 was crowded in, in order to decrease the area of the pit and raise the level of the oily sludge. On 12/21/00 the two sludge storage boxes were decontaminated. There will be no site activities for 12/22/00 through 01/03/00 due to the shutdown for the holidays.

During the week of January 06 2001, IT removed 52,080 gallons (15 trucks) of oily sludge. IT treated 9,800 gallons of water. The water was discharged into Black Lake Bayou. The site received 0.3 inches of rain over the holidays. IT removed 34 end dump trucks of mixed contaminated soil and sludge. Five surface soils samples were collected from the cleared areas (Figure 1) on the east and south sides of the pit. All samples had less than 1% grease and oil. Oil was observed seeping into the southwest pocket of the pit. Removal of clay from the pocket revealed lenses of oil in the clay. Removal of clay from the pocket continued until the water table was reached. Approximately 8 feet of clay was removed. The oily clay was placed in the sludge contaminated soil pile. IT backfilled the resulting 8 ft hole with clay from the surrounding area. Two sludge storage boxes, the sludge sump pump, and the dry prime pump were removed from the site. On 01/03/01 a house adjacent and north west of the site burned down. The fire was observed at 0800. The fire department was notified shortly afterwards. The fire department arrived at 0830 and extinguished the fire.

During the week of January 13 2001, IT removed 2,373 cubic yards (163 Trucks) of contaminated soil. The site received 2.5 inches of rain throughout the week. A backhoe, four filter containers, four scaffolds, a poly-tank and a bulldozer were removed from the site. Another

bull dozer was brought on site. H&E was onsite to repair a hydraulic leak on one of the excavators. James Industrial Contractors came on site to deliver road fill rocks. The rocks were spread along the drive way, where the trucks are loaded. Zee Medical Supplies delivered a fire hydrant and safety kits to the site. On 01/11-12/01 Philips Services was onsite to decontaminate the frac tank. Phillips Services removed 30 bbl of sludge from the frac tank.. Phillips Services transported the sludge to the US Liquids facility in Mermentau, LA.

During the week of January 20 2001, IT removed 1,250 cubic yards (84 Trucks) of contaminated soil. The site received 8.2 inches of rain. Contaminated soil from underneath the rock constructed truck driveway was removed. On 01/18/01the removal of mixed contaminated soil and sludge was complete. Samples collected from the cleared area of Pit #1 collected on 1/17/01 and on 1/3/01 had less than1% oil and grease, therefore it was determined that no further excavation was necessary. The frac tank, an excavator, hoses for the water treatment system, and a brush pile were removed from the site. On 1/16/01 site activities ended at 10:00 AM due to the rain. Rain water which collected in the cleared Pit #1 area was pumped off site. The suction hose was placed inside a ring of booms to prevent oil in the water from being pumped off site. The area outside of the perimeter of Pit #1 was plugged with fertilizer cores. The cores were 18 inches deep and 1 inches in diameter. The cores were placed approximately 3 feet apart from each other. Approximately 100 pounds of fertilizer was used in filling the cores. It was estimated by a survey performed on 1/15/01 that 5,800 yards of backfill material will be needed to fill in the cleared area of the pit. Five gallons of backfill material was sent to the Fugro Southwest Lab for proctor testing.

During the week of January 27, 2001, 176 trucks of backfill material were delivered to the site. On 1/27/01 Custom Dirt Work did not deliver any trucks of backfill material due to wet conditions at the Custom Dirt Work site. An excavator was taken off site. A Bobcat skid loader, a Bobcat street sweeper and a water truck were delivered to the site. The equipment was used to remove the backfill material that the trucks are tracking onto the street. The Bobcat street sweeper was removed from the site on 1/27/01 since it was not effective in removing the wet soil from the street. A bulldozer was delivered to the site. The bulldozer will be used to maintain the truck drive as loads of backfill material are brought on site. James Phipps of Fugro South Inc. was on site to take four compaction readings of the 12 inch lifts laid out in the pit area. Three of the readings had greater than 95% compaction with a moisture content of approximately 16%. One reading had 90% compaction with a moisture reading of 22%. A bulldozer was used to cut a trench, approximately two feet deep, on the dike on the south side of Pit #1. Fifty pounds of fertilizer was applied in the trench. The trench was closed after application of the fertilizer.

During the week of February 3, 2001, 325 trucks of backfill material were delivered to the site by Custom Dirt Work of Westlake, Louisiana. Due to wet conditions at Hackberry Pits and the site where soil is being obtained, no backfill material was delivered to the site on January 29, 2001 and the morning of January 30, 2001. On January 29, 2001, approximately 1,000 gallons of storm water was pumped from the northern section of the pit into a drainage ditch located north of Pete Seay Circle. The storm water then flowed into Black Lake Bayou. Three dump truck loads (approximately 45 cubic yards) of limestone were delivered on January 30, 2001. The limestone was used to construct an entrance road on the northeastern section of the pit. Dump trucks transporting the backfill used this road to access the pit. The backfill material

was dumped on the northern section of Pit #1, and spread throughout the pit using two bulldozers. In addition, a stockpile of native soil (approximately 200 to 300 cubic yards) was also spread throughout Pit #1. The backfill material was compacted by repeatedly tracking over the material with bulldozers. Backfilling activities have been completed at the site. A total of 501 truck loads of backfill material were delivered.

During the week of February 10, 2001, IT Corporation completed spreading the 501 truckloads of backfill material throughout Pit #1 using two bull dozers. In addition, a stockpile of native soil (approximately 200 to 300 cubic yards) was also spread throughout the pit. The backfill material was compacted by repeatedly tracking over the material with bulldozers. Tetra Tech EM Inc. visited the site to survey elevations of the backfill material for Pit #1 and the drainage ditch located between the site and Pete Seay Road. IT Corporation used the elevation data to grade the soil to allow adequate drainage of storm water from the site to the drainage ditch located adjacent to Pete Seay Circle. Fugro South Inc. was on site to conduct four nuclear density compaction tests for the final lift of soil. The tests were conducted using a Troxler 3440 Nuclear Density Machine. Percent compaction results range from 96% to 100+%. Moisture content results range from 13.8% to 18.3%. To allow storm water to drain from the site, the Cameron Parish Police Jury excavated soil from the drainage ditch located west of the site and adjacent to Pete Seay Circle. Approximately 11 sections of pipe associated with the Hackberry Pits site were removed from the drainage ditch, by the Cameron Parish Police Jury, during excavation activities. Creosote pilings from the site, and the pipe removed by the Cameron Parish Police Jury from the adjacent drainage ditch, were loaded into a roll-off container for off-site disposal.

On February 14, 2001 Charles Holston, Inc. transported 30 cubic yards of weathered creosote poles and debris to Newton County Landfill near Deweyville, Texas,

During the week of February 19, 2001, two sections of Pete Seay Circle were repaired by DaRousseau Construction Incorporated. The sections were cut on February 19 and filled on February 21, 2001. No additional work was required.

3. Enforcement:

A Letter of Federal Interest and Intent was sent to Mr. John Hogan, a representative of Austere Oil and Gas, Inc., a potentially responsible party for the Hackberry Pits. Auster Oil and Gas, Inc. has not claimed responsibility of the Hackberry Pits at this time.

4. Planned Removal Activities

No future activities are anticipated.

5. Next Steps

Pit #1 closure activities have been completed.

IV. Key Issues:

None.

22. Cost Information

Cost breakdowns for the Federal Government personnel are not available at this time.

The following are estimated cost breakdowns for the Corps of Engineers Contractor, as of 02/25/01:

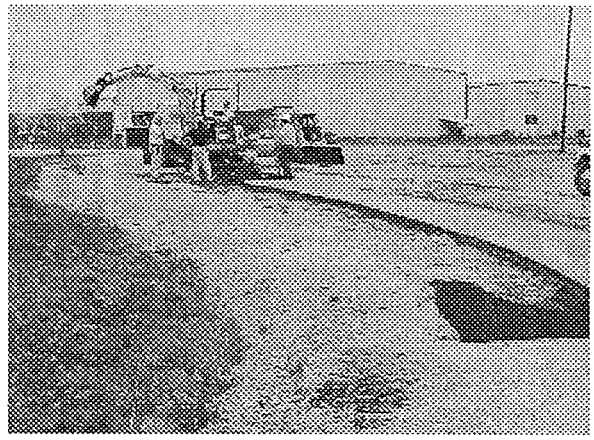
Personnel	$239,194
Equipment	$111,773
Material	$141,671
Subcontractors(s)	$486,277
Total	$978,915

VI. Attachments:

HACKP17-pic1.JPG: Asphalt crew fills cuts with fresh asphalt.
HACKP17-pic2.JPG: Completed repair of asphalt on south side of curve near 109 Pete Seay Circle.

OSC: Robert M. Ryan, P.E.
START: Rita Anderson, REM

Photographic Documentation for Hackberry Pits



HACKP17-pic1.JPG: Asphalt crew fills cuts with fresh asphalt.

HACKP17-pic2.JPG: Completed repair of asphalt on southside of curve near 109 Pete Seay Circle.